

REV.
D

SAE AS21153

RATIONALE

FEDERAL SUPPLY CLASS
3110

AS21153 REV D IS A FIVE YEAR REVIEW. CORRECTED "G" DIMENSION IN TABLE 1 DASH 5 SIZE, UPDATED SPECIFICATIONS TO CURRENT REQUIREMENTS, REFORMATTED GRAPHICS, TABLES AND NOTES, ADDED ZINC-NICKEL CODE, ADDED OPTIONAL MATERIAL FOR INNER RACE AND BALLS AND REMOVED "OR AN APPROVED EQUIVALENT" TO SEAL MATERIAL.

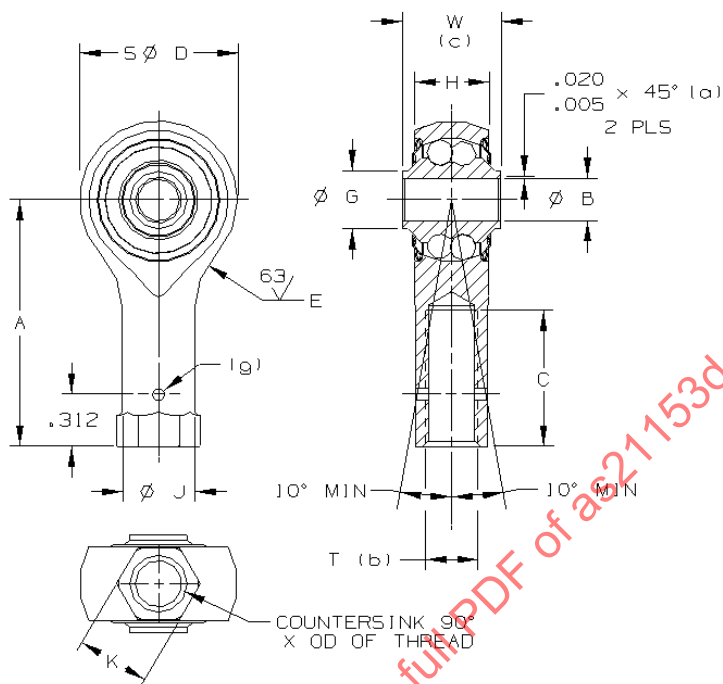


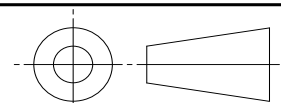
FIGURE 1

TABLE 1 - DIMENSIONS AND TOLERANCES

MS21153 DASH NUMBER (c)	BORE SIZE NOM.	A	ØB	C	ØD	E	H	ØJ	K BEAD OR HEX	N	ØG	T THREAD	W	WT LB APPROX.		
		±.010	+0.000 -0.003	±.031	±.010	NOM	±.010	±.010	±.010	+0.015 -0.000	MIN	UNFJ-3B	+0.000 -0.005			
-1	3/16	1.375	.1900	.750	.781	.390	.328	.375	BEAD .438	.005	.276	.2500-28RH	.437	.05		
-2								.438	HEX .438			.3125-24RH				
-3								.375	BEAD .438			.2500-28RH	.500	.06		
-4												.2500-28LH				
-5												.2500-28LH			.437	.05
-6	1/4	1.469	.2500	1.125	.938	.468	.438	.438	HEX .438	.340	.3125-24RH	.593	.07			
-7											.3125-24LH					
-8								1.875	HEX OR STRAIGHT			.4375-20RH	.870	.18		
-9												.4375-20LH				
-10																
-11	5/16	.3125	1.000	1.250	.500	.656	.438		.015	.501	.3125-24RH	.870	.10			
												.3125-24LH				

SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS21153D>

THIRD ANGLE PROJECTION



CUSTODIAN: SAE AIRFRAME CONTROL BEARINGS GROUP

PROCUREMENT SPECIFICATION: AS6039

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

(R) BEARING, BALL, ROD END, DOUBLE ROW,
PRECISION, INTERNAL THREAD, SELF-ALIGNING,
AIRFRAME, TYPE IV, -65 TO 300 °F

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TABLE 2 - ENGINEERING DATA

MS21153 DASH NUMBER (c)	RADIAL STRENGTH		AXIAL STRENGTH		RADIAL LOAD RATING 10 000 COMPLETE 90° CYCLES (e) (f)		MAXIMUM STARTING TORQUE
	LIMIT LOAD LBF	FRACTURE LOAD LBF	LIMIT LOAD LBF	FRACTURE LOAD LBF	CASE I	CASE II	IN-OZ
-1	1000	1500	200	300	1000	1000	3.0
-2							
-3							
-4							
-5							
-6	1720	2580	345	520	1720	1720	4.0
-7							
-8							
-9							
-10	2920	4375	585	880	2920	2600	6.0
-11							

REQUIREMENTS:

- A RADIUS GIVING THE SAME FILLET CLEARANCE WILL BE ACCEPTABLE.
- THREADS SHALL CONFORM TO UNJF-3B IN ACCORDANCE WITH AS8879. INTERNAL THREADS MAY BE MACHINED. THREAD LENGTH SHALL BE TOTAL LENGTH "C" ALLOWING A MAXIMUM OF TWO IMPERFECT THREADS.
- KEYWAY SLOT IF REQUIRED SHALL BE IN ACCORDANCE WITH NASM14198 AND SHALL BE DESIGNATED BY ADDING SUFFIX "C" TO THE DASH NUMBER.
- 10° MIN. MISALIGNMENT IN EITHER DIRECTION SHALL OCCUR WITHOUT INTERFERENCE BETWEEN BALL HOUSING AND SURFACES INDICATED BY DIMENSION "W".
- CASE I - LOAD FIXED WITH RESPECT TO OUTER RACE (AVERAGE LIFE RATING).
CASE II - LOAD FIXED WITH RESPECT TO INNER RACE (AVERAGE LIFE RATING).
- THESE RATINGS ARE FOR OPERATIONS UP TO 250°F MAXIMUM WHEN SUBJECTED TO OPERATION ABOVE 250 °F THE RATINGS SHOULD BE REDUCED BY 20%.
- DRILL .070 INCH DIA. THRU HOLE. INSPECTION HOLE FOR THREAD ENGAGEMENT.

NOTES:

NOTICE

THIS DOCUMENT REFERENCES A PART WHICH CONTAINS CADMIUM AS A PLATING MATERIAL. CONSULT LOCAL OFFICIALS IF YOU HAVE QUESTIONS CONCERNING CADMIUM'S USE.

- FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER ANY OTHER DOCUMENTS REFERENCED HEREIN.
- REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.
- RADIAL CLEARANCE: .0000 TO .0004 INCHES UNDER 5.5 LB FULLY REVERSING GAGE LOAD.
- AXIAL CLEARANCE: .000 TO .003 INCHES UNDER 5.5 LB FULLY REVERSING GAGE LOAD.

 An SAE International Group	AEROSPACE STANDARD	SAE AS21153 SHEET 2 OF 3	REV. D
	(R) BEARING, BALL, ROD END, DOUBLE ROW, PRECISION, INTERNAL THREAD, SELF-ALIGNING, AIRFRAME, TYPE IV, -65 TO 300 °F		